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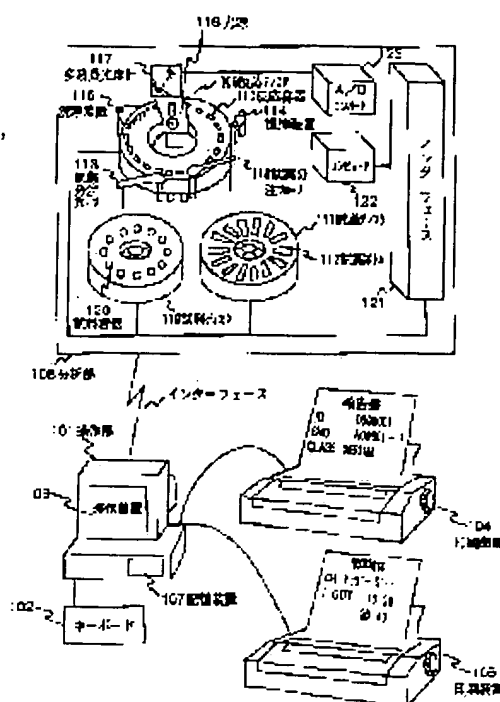(72)Inventor : MOROZUMI HIDEO
KOAKUTSU TAKAHIRO

(54) AUTOMATIC ANALYZING INSTRUMENT

(57)Abstract:

PROBLEM TO BE SOLVED: To facilitate managing of data and improve management efficiency for information, by connecting a plurality of printing devices to an operation part, setting a screen for selecting the printing devices and printing a measured result to a designated paper in accordance with the kind of a sample.

SOLUTION: After information symbolizing the kind of a liquid sample is added to a measurement result text, the text is transmitted to an operation part 101 via an interface. The operation part 101 temporarily stores the result text in a memory device 107, then reads out the text and edits in a printing form in accordance with the kind of the sample. Further, the operation part 101 reads out from the device 107 symbolization information related to a printing device which is set via a keyboard 102 before an analysis is carried out, compares with the information indicating the kind of the sample of the measurement result, and detects Whether or not any printing device to output is designated. If any printing device is designated, the result is output to the designated printing device. In this manner, since the measurement result is automatically classified and output to a designated printing paper in accordance with the kind of the liquid sample, the printed data can be easily classified, and accordingly management efficiency for information in an inspection room is improved.

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CLAIMS

[Claim(s)]
[Claim 1] The automatic analyzer carry out having the screen which chooses the kind of the aforementioned printer which outputs according to the kind of the aforementioned liquid sample in the automatic analyzer which consists of a control unit which has the storage which memorizes the display and the printer which perform the analysis section which has the mechanism in_which many components in a liquid sample are analyzed, the input of the analysis conditions of the aforementioned liquid sample, and the output of an analysis result, the aforementioned analysis conditions, and an analysis result as the feature.
[Claim 2] The automatic analyzer which can connect two or more aforementioned printers to the aforementioned control unit in a claim 1.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] The automatic analyzer characterized by the ability of the analysis of a liquid sample installed in the sample disk to do this invention is started, and it is related with the automatic analyzer which can analyze the sample sample of varieties simultaneously especially.

[0002]
[Description of the Prior Art] One kind of print sheet was followed by one set of a printer, and the conventional automatic analyzer was printed while performing the fixed quantity of the aforementioned quality of the specimen, outputting the measurement result automatically on real time after the measurement end and displaying a result on display by mixing the reagent corresponding to the quality of the specimen and the aforementioned quality of the specimen in a sample, irradiating light at the produced reacting matter, and measuring an absorbance, turbidity, a reflection factor, etc. It follows on large-scale-izing of a clinical-biochemistry inspection in recent years, and advanced features. however, with the increase in the measurement size of a patient sample Since automation of analysis aiming at the maintenance of analysis precision -- measurement of control-sample liquid and standard sample liquid is automatically performed between measurement of a patient sample if needed -- also progresses and a measuring method is being diversified, Although enabling it to choose a printing format according to a liquid sample etc. corresponded to diversification of the measuring method of a liquid sample, the help had to perform carrying out judgment processing, in order to manage the measurement result data of the varieties printed succeeding one kind of print sheet. Moreover, when specific forms, such as a print sheet [finishing / inspection result report format printing for patients / as a print sheet], were set up, the measurement result of the liquid sample with which printing formats differ was not able to be printed.
[0003]
[Problem(s) to be Solved by the Invention] With the above-mentioned conventional technology, one set only of a printer was connected to the automatic analyzer, but in order to manage the measurement result data of the varieties printed succeeding one kind of print sheet, the work which carries out classification processing of the print data had to be done by the help, and decline in working efficiency was caused.
[0004] The purpose of this invention makes management of printing result data easy, and is to realize improvement in efficiency of the information management in a laboratory.
[0005]
[Means for Solving the Problem] In order to attain the above-mentioned purpose, this invention prepares the screen which chooses the printer which should be used for a control unit according to the kind of liquid sample. Moreover, two or more terminals for connection are prepared in a control unit, and a printer is connected to each. After performing conditioning of the printer beforehand used before analysis according to the kind of liquid sample on the aforementioned screen, analysis is started, the kind of liquid sample added to the measurement result data automatically outputted on real time after a measurement end uses as a key, the printer which should be outputted judges with reference to the setups of the printer according to the kind of liquid sample in the aforementioned screen, and it outputs to the appointed printer according to the kind of liquid sample, respectively.
[0006] In the automatic analyzer by this invention, it makes it possible to print a measurement result to a

specification print sheet according to the kind of liquid sample by preparing the screen which chooses the printer which should be used for a control unit according to the kind of liquid sample, and connecting two or more printers to a control unit.

[0007] Thus, while attaining diversification of the printing method by classifying automatically the print sheet outputted according to the kind of liquid sample, classification processing of the printed measurement result data can be made easy, and improvement in efficiency of the information management in a laboratory can be aimed at.

[0008]

[Embodiments of the Invention] The example of this invention is explained based on an accompanying drawing below.

[0009] Drawing 2 is one example of the screen for realizing this invention.

[0010] the kind of four liquid samples resembles the display 204 of a control unit, respectively, it is received, and a selection button with the assistant box 205 for choosing a printer is displayed A user can choose independently from the assistant box 205 the kind of printer to use, or the thing which is not printed through a keyboard 201 or the input unit of mouse 202 grade in advance of analysis for every kind of liquid sample. After the information concerning the selected printer is symbolized as information which associates the kind of liquid sample, and the kind of printer, it is stored in the storage 203 of a control unit.

[0011] Next, two or more sets of printers are connected to the control unit of this invention, the case where two sets of printers are connected is made into an example, and how to classify automatically the print sheet which should be outputted according to the kind of liquid sample is explained.

[0012] It is shown that drawing 1 can print the measurement result of a liquid sample which is different in two or more printers, respectively. In drawing 1 , 101 is a control unit, and a control unit is a computer which has the peripheral device of the storage 107 grade for memorizing the interface 106 for connecting with the printer 104 for printing the display 103 for displaying the keyboard 102 for inputting data, and data, and data, a printer 105, and the analyzor, and data. The analyzor 108 has connected with a control unit 101 through an interface 106. 109 is a reaction disk and two or more reaction containers 110 are installed on the concentric circle periphery. 111 is a reagent disk and two or more reagent bottles 112 with which various reagents entered on the concentric circle periphery are installed. Around the reaction disk 109, the sample distributive-pouring probe 113, churning equipment 114, a washing station 115, the light source 116, and the multi-wavelength photometer 117 are arranged respectively. The reagent distributive-pouring probe 118 is arranged between the reaction disk 109 and the reagent disk 111. Moreover, it is on the turning-circle periphery of the sample distributive-pouring probe 113, and the sample disk 119 is installed next to the reagent disk 111. Two or more specimen containers 120 to which the sample was paid are installed in the sample disk 119.

[0013] These mechanism operation is altogether controlled by the computer 122 through the interface 121.

[0014] Drawing 3 is a processing flow chart which shows the art for realizing this invention. A user does an analysis start directions 302, after doing analysis conditions input 301 according to the kind of liquid sample using the keyboard 102 and display 103 of a control unit 101. Analysis conditions are transmitted to the analyzor through an interface 106.

[0015] The analyzor 108 performs analysis operation as follows based on the received analysis conditions.

[0016] Only the specified quantity pours distributively the sample by which the sample distributive-pouring probe 113 entered into the specimen container 120 in the reaction container 110. If distributive pouring to one specimen container 120 is completed, the sample disk 119 will rotate so that the following specimen container 120 may come just under the sample distributive-pouring probe 113. The reaction container 110 which had the sample poured distributively rotates the reaction disk 109 top by rotation operation of the reaction disk 109. Measurement of the absorbance by churning of the reaction mixture by distributive pouring of the reagent in the reagent bottle 112 by the reagent distributive-pouring probe 118 and churning equipment 114, the light source 116, and the multi-wavelength photometer 117 is performed to the meantime to the sample in the reaction container 110, and the reaction container 110 which analysis ended by the washing station 115 behind is washed. The

measured absorbance signal goes into a computer 122 through an interface 121 via A/D converter 123. This absorbance signal is changed into the concentration data of the measuring object component in a sample based on the calibration curve created from the absorbance signal of the standard sample liquid measured by the analysis method beforehand set up for every analysis item. After the data by which concentration conversion was carried out carry out the information which symbolized the kind of liquid sample addition 303 as a measurement result text, they are transmitted to a control unit 101 through an interface 106.

[0017] Once a control unit 101 stores the received measurement result text in storage 107, Took edit 304 for the readout and the printing format according to the kind of sample, and set up through the input unit 102 in advance of analysis beforehand further. The symbolized information concerning a printer is read from storage 107 (305). If there is specification of the corresponding printer after judging whether there is any specification of the printer which should be outputted as compared with the information which shows the kind of sample of a measurement result (306), it will output to the specified printer (307,308).

[0018] According to this example, on the screen which sets up the printer which should use a print sheet [finishing / inspection result report format printing to a printer 104] for it according to a liquid sample, for example when the print sheet of a blank paper is set as a printer 105, respectively By carrying out the purpose of the proofreading of inspection data for the measurement result of the required general patient sample of the report of an inspection result, and an urgent patient sample to a printer 104, and setting the unnecessary standard sample of a report as a printer 105 In the case of the standard sample to which a patient sample differs from a patient sample also with the purpose and a print format in the printer 104 to which the print sheet [finishing / report format printing] was set It can classify into the printer 105 to which the print sheet of a blank paper was set automatically, respectively, and can print, classification processing of printing result data can be made easy, and improvement in efficiency of the information management in a laboratory can be aimed at.

[0019]

[Effect of the Invention] While according to this invention carrying out the classification output of the measurement result automatically to a specification print sheet according to the kind of liquid sample and attaining diversification of the printing method by having the screen which chooses the kind of printer outputted according to the kind of liquid sample, and connecting two or more printers, classification processing of print data can be made easy and improvement in efficiency of the information management in an inspecting room can be realized.

[Translation done.]

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TECHNICAL FIELD

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PRIOR ART

[Description of the Prior Art] The conventional automatic analyzer is mixing the reagent corresponding to ******-ed and the aforementioned ******-ed in a sample, irradiating light at the produced reacting matter, and measuring an absorbance, turbidity, a reflection factor, etc. While performing the fixed quantity of the aforementioned ******-ed, outputting the measurement result automatically on real time after the measurement end and displaying a result on display, one kind of print sheet was followed by one set of a printer, and it was printing. However, it follows on large-scale-izing of a clinical-biochemistry inspection in recent years, and advanced features, and is the increase in the measurement size of a patient sample. Since automation of analysis aiming at the maintenance of analysis precision -- measurement of control-sample liquid and standard sample liquid is automatically performed between measurement of a patient sample if needed -- also progresses and a measuring method is being diversified, Although enabling it to choose a printing format according to a liquid sample etc. corresponded to diversification of the measuring method of a liquid sample, the help had to perform carrying out judgment processing, in order to manage the measurement result data of the varieties printed succeeding one kind of print sheet. Moreover, when specific forms, such as a print sheet [finishing / inspection result report format printing for patients / as a print sheet], were set up, the measurement result of the liquid sample with which printing formats differ was not able to be printed.

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EFFECT OF THE INVENTION

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] With the above-mentioned conventional technology, one set only of a printer was connected to the automatic analyzer, but in order to manage the measurement result data of the varieties printed succeeding one kind of print sheet, the work which carries out classification processing of the print data had to be done by the help, and decline in working efficiency was caused. [0004] The purpose of this invention makes management of printing result data easy, and is to realize improvement in efficiency of the information management in a laboratory.

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MEANS

[Means for Solving the Problem] In order to attain the above-mentioned purpose, this invention prepares the screen which chooses the printer which should be used for a control unit according to the kind of liquid sample. Moreover, two or more terminals for connection are prepared in a control unit, and a printer is connected to each. After performing conditioning of the printer beforehand used before analysis according to the kind of liquid sample on the aforementioned screen, analysis is started, the kind of liquid sample added to the measurement result data automatically outputted on real time after a measurement end uses as a key, the printer which should be outputted judges with reference to the setups of the printer according to the kind of liquid sample in the aforementioned screen, and it outputs to the appointed printer according to the kind of liquid sample, respectively.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] Explanatory drawing showing connecting two or more printers and printing a measurement result to a different print sheet according to the kind of liquid sample.
[Drawing 2] Explanatory drawing showing the screen which chooses the printer used according to the kind of liquid sample.
[Drawing 3] Processing flow chart.
[Description of Notations]
101 [-- Display, 104,105 / -- A printer, 107 / -- Storage.] -- A control unit, 102 -- A keyboard, 103
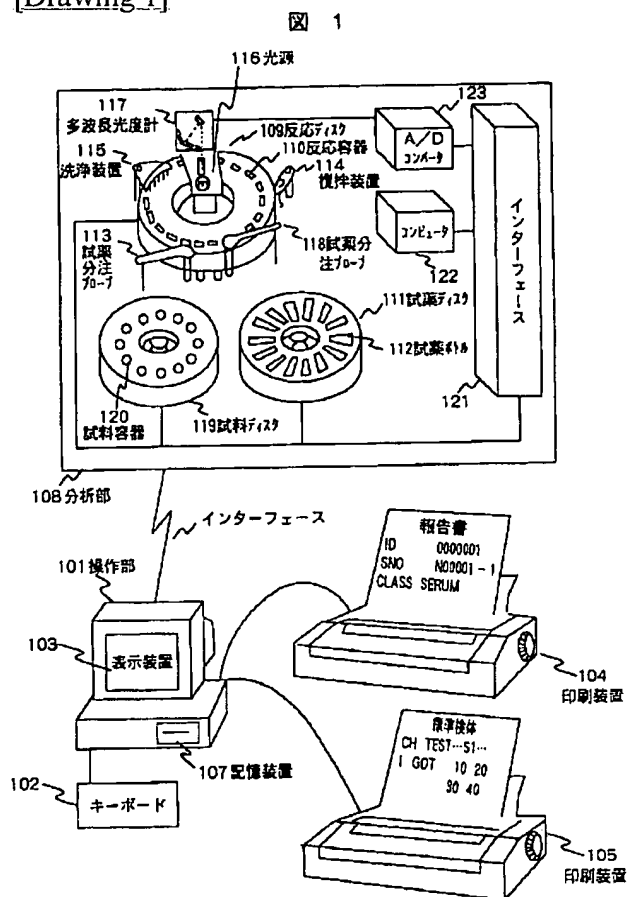

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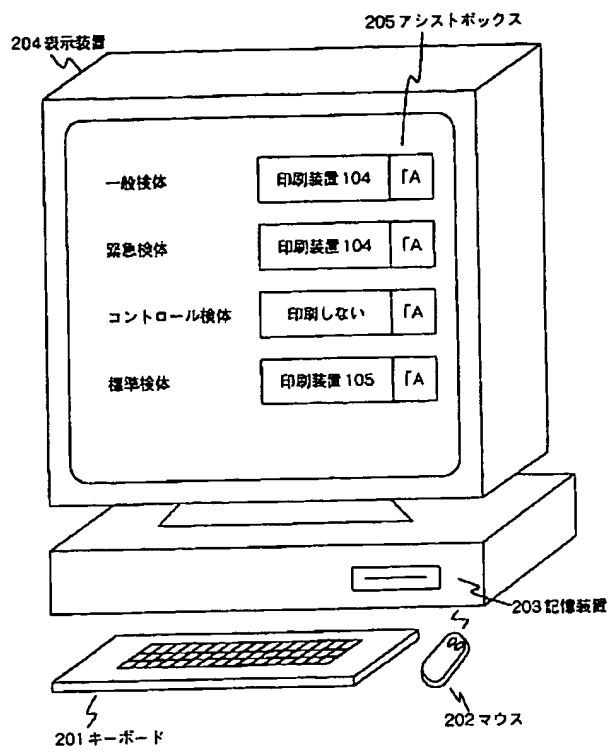3.In the drawings, any words are not translated.
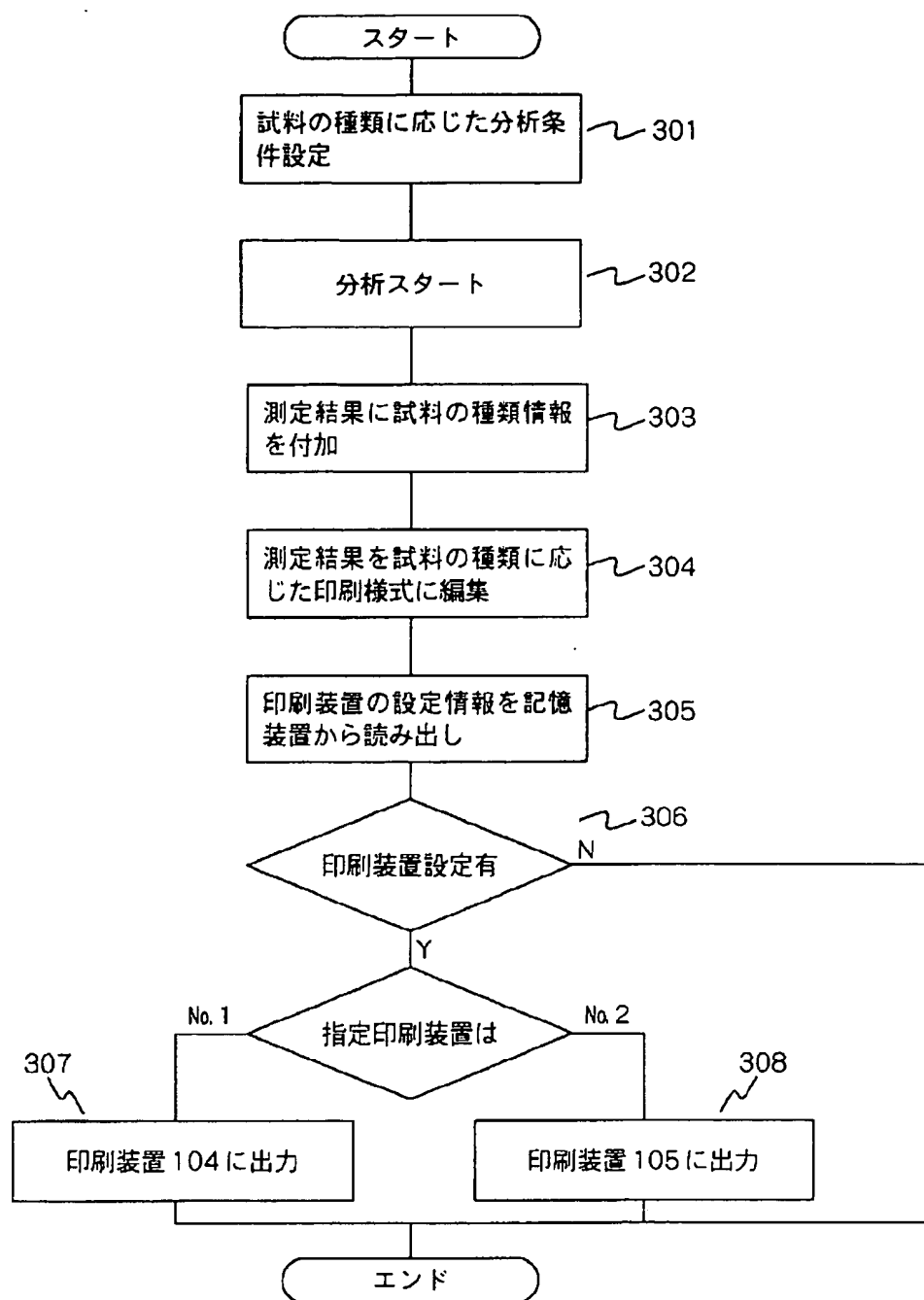

DRAWINGS

[Drawing 1]

[Drawing 2]

図 2

[Drawing 3]

図　3

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[Translation done.]

PATENT ABSTRACTS OF JAPAN

(11)Publication number :   10-010132
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(51)Int.Cl	G01N 35/00

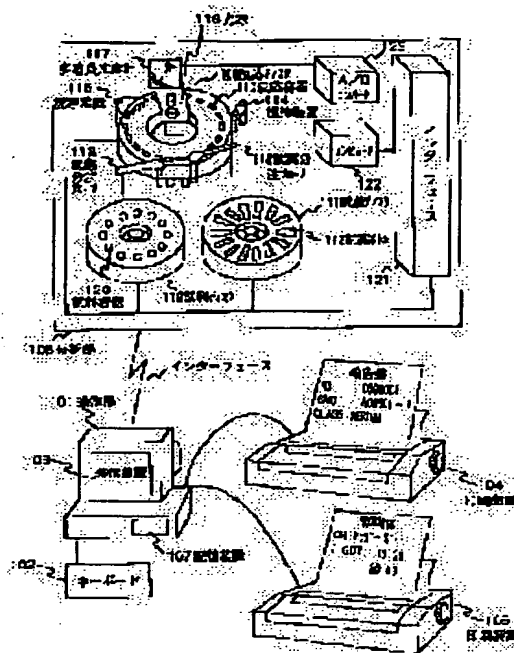|		
(21)Application number : 08-165564	(71)Applicant :	HITACHI LTD HITACHI INSTR ENG CO LTD
(22)Date of filing : 26.06.1996	(72)Inventor :	MOROZUMI HIDEO KOAKUTSU TAKAHIRO

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(57)Abstract:
PROBLEM TO BE SOLVED: To facilitate managing of data and improve management efficiency for information, by connecting a plurality of printing devices to an operation part, setting a screen for selecting the printing devices and printing a measured result to a designated paper in accordance with the kind of a sample.
SOLUTION: After information symbolizing the kind of a liquid sample is added to a measurement result text, the text is transmitted to an operation part 101 via an interface. The operation part 101 temporarily stores the result text in a memory device 107, then reads out the text and edits in a printing form in accordance with the kind of the sample. Further, the operation part 101 reads out from the device 107 symbolization information related to a printing device which is set via a keyboard 102 before an analysis is carried out, compares with the information indicating the kind of the sample of the measurement result, and detects Whether or not any printing device to output is designated. If any printing device is designated, the result is output to the designated printing device. In this manner, since the measurement result is automatically classified and output to a designated printing paper in accordance with the kind of the liquid sample, the printed data can be easily classified, and accordingly management efficiency for information in an inspection room is improved.

LEGAL STATUS
[Date of request for examination]
[Date of sending the examiner's decision of rejection]
[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]
[Date of final disposal for application]
[Patent number]
[Date of registration]
[Number of appeal against examiner's decision of rejection]
[Date of requesting appeal against examiner's decision of rejection]
[Date of extinction of right]

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G01N　35/00			G01N　35/00	A	

審査請求　未請求　請求項の数2　OL　（全5頁）

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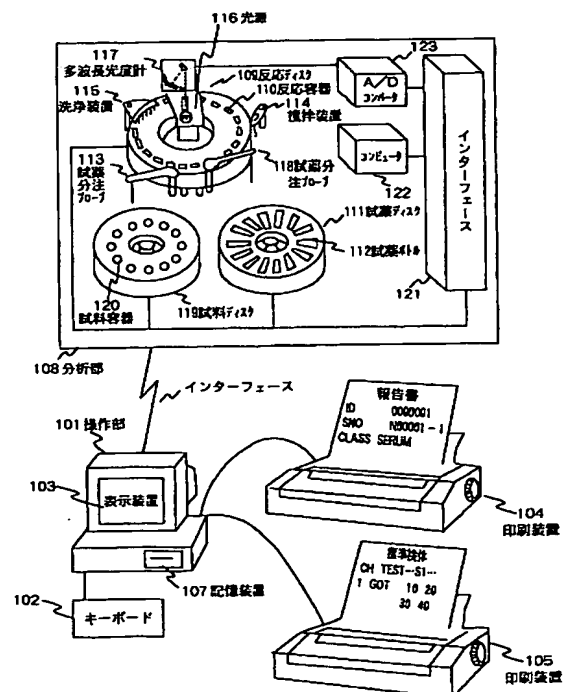　　　　　　　茨城県ひたちなか市大字市毛882番地　株
　　　　　　　式会社日立製作所計測器事業部内
(74)代理人　弁理士　小川　勝男

(54)【発明の名称】　自動分析装置

(57)【要約】
【課題】印刷された測定結果データの分類処理を容易にし、検査室における情報管理の効率向上を図る。
【解決手段】操作部101に複数台の印刷装置104，105を接続する。また、液体試料の種類に応じて使用する印刷装置の種類、及び、印刷有無を選択する表示画面が存在する。利用者は、目的に応じて、選択した印刷用紙に、指定した種類の液体試料の測定結果を自動的に出し分ける。

図　1

【特許請求の範囲】
【請求項１】液体試料中の諸成分を分析する機構を有する分析部と、前記液体試料の分析条件の入力と分析結果の出力を行う表示装置，印刷装置，前記分析条件，分析結果を記憶する記憶装置を有する操作部とからなる自動分析装置において、前記液体試料の種類に応じて出力する前記印刷装置の種類を選択する画面を有することを特徴とする自動分析装置。
【請求項２】請求項１において、前記操作部に複数の前記印刷装置を接続できる自動分析装置。
【発明の詳細な説明】
【０００１】
【発明の属する技術分野】本発明はサンプルディスクに設置した、液体試料の分析ができることを特徴とする自動分析装置に係り、特に、多種類の試料検体を同時に分析することのできる自動分析装置に関する。
【０００２】
【従来の技術】従来の自動分析装置は、試料中の被検物質と前記被検物質に対応する試薬とを混合し、生じた反応物質に光を照射して吸光度や濁度，反射率等を測定することにより前記被検物質の定量を行い、測定終了後に測定結果をリアルタイムで自動的に出力し、結果を表示装置に表示するとともに、１台の印刷装置により１種類の印刷用紙に連続して印刷していた。しかし、近年の臨床生化学検査の大規模化，高機能化に伴い、患者検体の測定数の増加と共に、コントロール試料液や、標準試料液の測定が、必要に応じて自動的に患者検体の測定間に行われるなど、分析精度の維持管理を目的とする分析の自動化も進み、測定方法が多様化してきているため、液体試料に応じて印字様式を選択することができるようにするなど、液体試料の測定方法の多様化に対応しているが、１種類の印刷用紙に連続して印刷された多種類の測定結果データを管理するために分別処理することは、人手により行わなければならなかった。また、印刷用紙として患者用の検査結果報告書様式印刷済みの印刷用紙など特定の用紙を設定した場合には、印字様式の異なる液体試料の測定結果の印刷を行うことはできなかった。
【０００３】
【発明が解決しようとする課題】上記従来技術では、自動分析装置に１台の印刷装置しか接続しておらず、１種類の印刷用紙に連続して印刷された多種類の測定結果データを管理するために、印刷データを分類処理する作業は人手により行わなければならず、作業効率の低下を招いていた。
【０００４】本発明の目的は、印刷結果データの管理を容易にし、検査室における情報管理の効率向上を実現することにある。
【０００５】
【課題を解決するための手段】上記目的を達成するために、本発明は操作部に、液体試料の種類に応じて使用す

べき印刷装置を選択する画面を設ける。また、操作部に複数個の接続用端子を設け、それぞれに印刷装置を接続する。分析前に、あらかじめ前記画面で液体試料の種類に応じて使用する印刷装置の条件設定を行った後分析を開始し、測定終了後にリアルタイムで自動的に出力される測定結果データに付加される液体試料の種類をキーにして、前記画面での液体試料の種類に応じた印刷装置の設定条件を参照し、出力すべき印刷装置を判定し、液体試料の種類に応じてそれぞれ指定の印刷装置へ出力する。
【０００６】本発明による自動分析装置では、操作部に液体試料の種類に応じて使用すべき印刷装置を選択する画面を設け、操作部に複数の印刷装置を接続することにより、液体試料の種類に応じて測定結果を指定印刷用紙へ印刷することを可能にする。
【０００７】このように、液体試料の種類に応じて出力する印刷用紙を自動的に分類することにより、印刷方法の多様化を図るとともに、印刷された測定結果データの分類処理を容易にし、検査室における情報管理の効率向上を図ることができる。
【０００８】
【発明の実施の形態】以下に本発明の実施例を添付図面に基づいて説明する。
【０００９】図２は本発明を実現するための画面の一実施例である。
【００１０】操作部の表示装置２０４に、四つの液体試料の種類のそれぞれに対し、印刷装置を選択するためのアシストボックス２０５による選択ボタンを表示させる。利用者は、分析に先立ち、液体試料の種類ごとに独立して、キーボード２０１、または、マウス２０２等の入力装置を介してアシストボックス２０５から、使用したい印刷装置の種類、または、印刷しない、ことを選択することができる。選択された印刷装置に係る情報は、液体試料の種類と印刷装置の種類とを関連づける情報として記号化された後、操作部の記憶装置２０３に格納される。
【００１１】次に、本発明の操作部に複数台の印刷装置を接続して、液体試料の種類に応じて出力すべき印刷用紙を自動的に分類する方法について、２台の印刷装置を接続した場合を例とし説明する。
【００１２】図１は複数の印刷装置にそれぞれ異なる液体試料の測定結果を印刷することができることを示す。図１で、１０１は操作部であり、操作部は、データを入力するためのキーボード１０２，データを表示するための表示装置１０３，データを印刷するための印刷装置１０４，印刷装置１０５，分析部と接続するためのインタフェース１０６、及びデータを記憶するための記憶装置１０７等の周辺装置を有するコンピュータである。分析部１０８はインタフェース１０６を介して操作部１０１と接続している。１０９は反応ディスクであり、その同

心円周上に反応容器１１０が複数個設置されている。１１１は試薬ディスクであり、その同心円周上に種々の試薬が入った試薬ボトル１１２が複数個設置されている。反応ディスク１０９の周囲には、試料分注プローブ１１３，撹拌装置１１４，洗浄装置１１５，光源１１６，多波長光度計１１７が、各々配置されている。反応ディスク１０９、及び試薬ディスク１１１の間には、試薬分注プローブ１１８が配置されている。また試料分注プローブ１１３の回転円周上で、かつ試薬ディスク111の隣には、試料ディスク１１９が設置されている。試料を入れた試料容器１２０は、試料ディスク１１９の中に複数個設置されている。

【００１３】これらの機構動作はすべて、インタフェース１２１を介してコンピュータ122により制御されている。

【００１４】図３は本発明を実現するための処理方法を示す処理フローチャートである。利用者は、操作部１０１のキーボード１０２と表示装置１０３を使って液体試料の種類に応じて分析条件を入力３０１したのち、分析開始を指示３０２する。分析条件は、インタフェース１０６を介して分析部へ送信される。

【００１５】分析部１０８は受信した分析条件に基づき次のように分析動作を行う。

【００１６】試料分注プローブ１１３が、試料容器１２０の中に入った試料を所定量だけ反応容器１１０に分注する。一つの試料容器１２０に対する分注が完了したら、次の試料容器１２０が試料分注プローブ１１３の真下に来るように試料ディスク１１９が回転する。試料を分注された反応容器１１０は反応ディスク１０９の回転動作により、反応ディスク１０９上を回転移動する。その間に反応容器１１０の中の試料に対し、試薬分注プローブ１１８による試薬ボトル１１２内の試薬の分注、撹拌装置１１４による反応液の撹拌、光源１１６及び多波長光度計１１７による吸光度の測定が行われ、後に洗浄装置１１５によって分析の終了した反応容器１１０が洗浄される。測定された吸光度信号はＡ／Ｄコンバータ１２３を経由し、インタフェース１２１を介してコンピュータ１２２へ入る。この吸光度信号は、あらかじめ分析項目毎に設定された分析法で測定しておいた標準試料液の吸光度信号から作成した検量線に基づき、試料中の測定対象成分の濃度データに変換される。濃度変換されたデータは測定結果テキストとして、液体試料の種類を記号化した情報を付加３０３した後、インターフェース１

０６を介して操作部１０１に送信される。

【００１７】操作部１０１は、受信した測定結果テキストを一度、記憶装置１０７に格納した後、読みだし、試料の種類に応じた印字様式に編集３０４し、更に分析に先だってあらかじめ入力装置１０２を介して設定しておいた、印刷装置に係る記号化された情報を記憶装置１０７から読み出し（３０５）、測定結果の試料の種類を示す情報と比較し、出力すべき印刷装置の指定があるかどうかを判定（３０６）した後、該当する印刷装置の指定があれば、指定した印刷装置へ出力（３０７，３０８）する。

【００１８】本実施例によれば、たとえば、印刷装置１０４に検査結果報告書様式印刷済みの印刷用紙を、印刷装置１０５に白紙の印刷用紙を、それぞれ設定しておいた場合、液体試料に応じて使用すべき印刷装置を設定する画面で、検査結果の報告書の必要な一般患者検体、及び、緊急患者検体の測定結果を印刷装置１０４に、検査データの較正を目的し、報告書の不要な標準検体を印刷装置１０５に設定することにより、患者検体は報告書様式印刷済みの印刷用紙が設定された印刷装置１０４に、患者検体とは目的、印刷様式とも異なる標準検体の場合は、白紙の印刷用紙が設定された印刷装置１０５に、それぞれ自動的に分類して印刷することができ、印刷結果データの分類処理を容易にし、検査室における情報管理の効率向上を図ることができる。

【００１９】

【発明の効果】本発明によれば、液体試料の種類に応じて出力する印刷装置の種類を選択する画面を有し、かつ、印刷装置を複数接続することにより、液体試料の種類に応じて測定結果を指定印刷用紙に自動的に分類出力し、印刷方法の多様化を図るとともに、印刷データの分類処理を容易にし、検査室における情報管理の効率向上を実現することができる。

【図面の簡単な説明】

【図１】複数の印刷装置を接続して、液体試料の種類に応じて測定結果を異なる印刷用紙に印刷することを示す説明図。
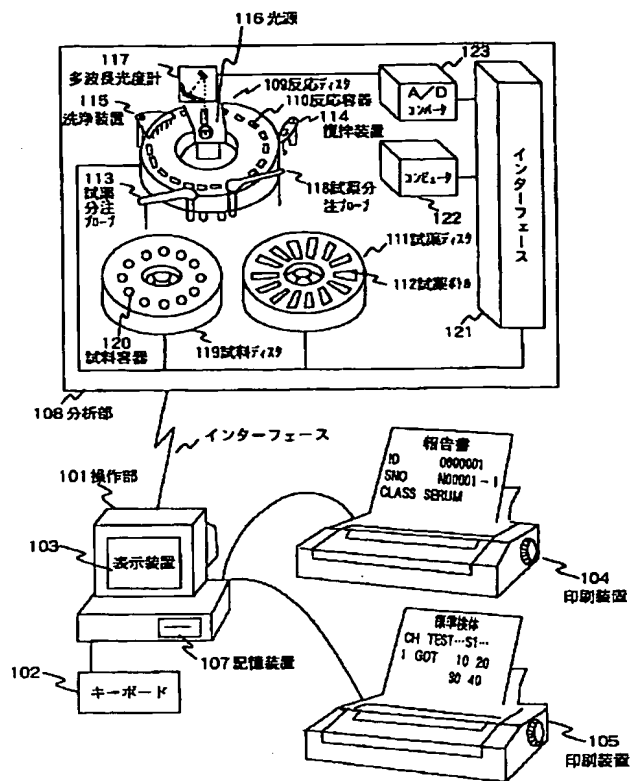
【図２】液体試料の種類に応じて使用する印刷装置を選択をする画面を示す説明図。

【図３】処理フローチャート。

【符号の説明】

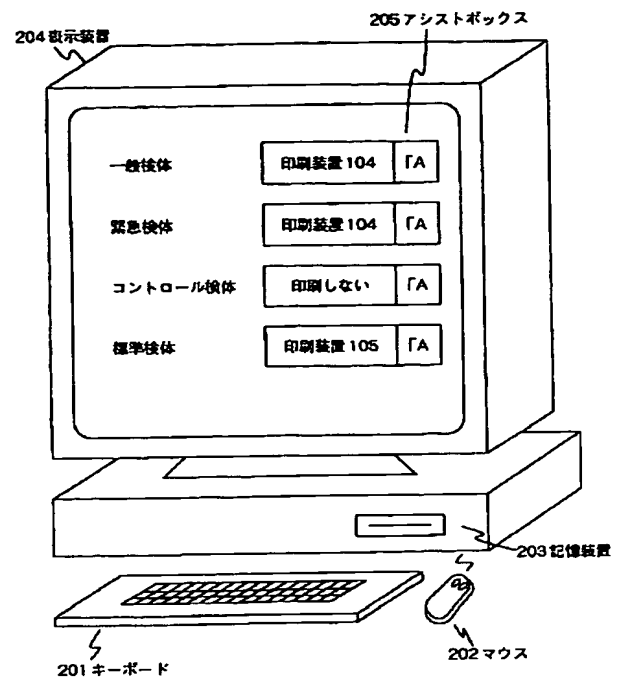１０１…操作部、１０２…キーボード、１０３…表示装置、１０４，１０５…印刷装置、１０７…記憶装置。

【図１】

図　１

【図２】

図　２

【図３】

図　３

スタート

試料の種類に応じた分析条件設定　301

分析スタート　302

測定結果に試料の種類情報を付加　303

測定結果を試料の種類に応じた印刷様式に編集　304

印刷装置の設定情報を記憶装置から読み出し　305

印刷装置設定有　306　N

Y

指定印刷装置は　No.1　No.2

307　印刷装置１０４に出力

308　印刷装置１０５に出力

エンド